AMENDMENTS TO THE CLAIMS

Claim 9 is being amended. All pending claims are reproduced below, including those that remain unchanged.

1. (Previously Presented) A job management apparatus for use in a batch job execution system including a plurality of service providers in communication with the job management apparatus, the apparatus comprising:

a client communications part which receives a batch job from a client;

an extracting part which extracts one or more task from the batch job; and,

an assigning part which receives a request work signal from each of the plurality of service providers that is available to perform work, each request work signal informing the assigning part of one or more function or service that the service provider can perform;

wherein the assigning part delegates each task to one of the service providers that can perform the function or service required to perform the task; and

wherein the assigning part sends an idle assignment signal to each service provider from which the request work signal is received but for which there is not a task available, the idle signal informing the service provider to not send further request work signals until the service provider receives a work available signal.

2. (Original): The job management apparatus of claim 1, wherein the plurality of service providers are operating on a plurality of machines.

3. (Canceled):

4. (Previously Presented): The job management apparatus of claim 1, further comprising at least one contact part which receives a status report signal from the service providers, which updates the status of the task being performed by the service provider.

5.   (Previously Presented): The job management apparatus of claim 4, wherein the work request signal specifies a minimum frequency at which the status report signal will be sent to the contact part.

6.   (Previously Presented): The job management apparatus of claim 4, wherein the status report signal informs the contact part of completion of the task.

7.   (Original): The job management apparatus of claim 1, further being in communication with a job database which stores the batch job upon receipt from the client; and

    the job database being regularly updated as jobs are executed by batch job execution system.

8.   (Original): The job management apparatus of claim 7, further comprising a retrieving part which retrieves the batch job from the job database when the batch job is to be executed.

9.   (Currently Amended): A batch job execution system for communicating with at least one client, comprising:

    a job management apparatus in communication with the clients which receives a batch job from a client, extracts a task from the batch job, and assigns the task;

    a job database in communication with the job management apparatus which stores the batch job;

    a plurality of service providers in communication with the job management apparatus which receive the assigned task, perform the task, and return a result to the job management apparatus; and,

    a plurality of provider managers, each in communication with the job management apparatus and in communication with a corresponding subset of the plurality of service providers which monitors the tasks being performed on the service providers and provides status information to the job management apparatus, wherein at

3

least one said subset of the plurality of service providers includes multiple service providers.

10.   (Previously Presented): The batch job execution system of claim 9, wherein a said provider manager in response to a request to increase capacity from the job management apparatus assigns additional service providers to receive tasks from the job management apparatus.

11.   (Previously Presented): The batch job execution system of claim 9, wherein if a said service provider fails to complete its assigned task within a predetermined time, the corresponding provider manager communicates with the service provider, and informs the job management apparatus of the task status in response to the communication with the service provider.

12.   (Currently Amended): The batch job execution system of claim 9, wherein a said provider manager informs the service provider performing the task to terminate performance of the task in response to a signal received from said job management apparatus.

13.-16. (Canceled)

17.   (Previously Presented) A computer implemented method for preparing and executing a batch job by a batch job execution system, comprising the steps of:

    submitting a batch job with processing parameters to a job management apparatus;

    storing the batch job in a job database;

    receiving a work request signal from each of a plurality of service providers that is available to perform work, each work request signal informing the job management apparatus of one or more function or service that the service provider can perform;

    determining whether the batch job execution system is able to process the batch job;

4

extracting at least one task from the batch job;

delegating each task to one of the service providers that can perform the function or service required to perform the task; and

sending an idle assignment signal to each service provider from which the request work signal is received but for which there is not a task available, the idle signal informing the service provider to not send further request work signals until the service provider receives a work available signal; and

sending a work available signal to each service provider that was previously sent the idle assignment signal but for which a task is available.

18.   (Original): The method of claim 17, further comprising the step of retrieving the batch job from the batch job database prior to the step of extracting at least one task.

19.   (Original): The method of claim 17, wherein the step of delegating further comprises delegating a plurality of tasks to the plurality of service providers to be performed in parallel.

20.   (Previously Presented): The method of claim 17, wherein the step of performing, further includes receiving a status report signal from the service provider performing the task which updates the status of the task being performed.

21.   (Previously Presented): The method of claim 17, further comprising determining whether the batch job execution system is able to process the batch job; wherein the step of determining further includes assigning additional service providers to perform tasks for the job management apparatus if it is determined that the batch job execution system is unable to process the job.

22.   (Original): The method of claim 17, further comprising the steps of:

communicating with the service provider performing the task after a predetermined time;

informing the job management apparatus of the tasks status; and,

5

the job management apparatus determining whether to re-assign the task or wait for task completion in response to the step of updating the task status.

23.   (Original):   The method of claim 17, further comprising the step of terminating the step of performing the task in response to receiving a signal from the job management apparatus, prior to the step of completing the task.

24.   (Previously Presented)   An article of manufacture including an information storage medium wherein is stored information comprising;

a client communications software component which receives a batch job from a client;

an extracting software component which extracts one or more task from the batch job; and,

an assigning software component which receives a request work signal from each of a plurality of service providers that is available to perform work, each request work signal informing the assigning part of the function or service that the service provider performs;

wherein the assigning software component delegates each task to one of the service providers that can perform the function or service required to perform the task; and

wherein the assigning software component sends an idle assignment signal to each service provider that sent a request work signal but for which there is not a task available, the idle signal instructing the service provider to not send further request work signals until the service provider receives a work available signal.

25.   (Original):   The article of manufacture of claim 24, wherein the assigning software component monitors which service providers are able to perform a task.

26.   (Previously Presented):   The article of manufacture of claim 24, further comprising a contact software component which receives a status report signal from the

6

plurality of service providers which informs the contact software component of the status of the task being performed.

27.   (Currently Amended): The article of manufacture of claim 26, wherein the work request signal specifies a minimum frequency at which the status report signal will be sent to the contact software component.

28.   (Original): The article of manufacture of claim 24, further comprising a job database software component which stores the batch job upon receipt from the client, wherein the client communications software component is in communication with the job database software component.

29.   (Original): The article of manufacture of claim 28, further comprising a retrieving software component which retrieves the batch job from the job database software component when the batch job is to be executed.

30.   (Original): The article of manufacture of claim 24, further comprising at least one provider manager software component in communication with the plurality of service providers which monitors the tasks being performed on the service providers and provides status information to the job management software component.

7